power control signal may designate an increase/decrease relative to the transmission power when the reservation packet was transmitted, or may be an absolute value (increased/decreased value) of the transmission power, whichever of them is determined by the system. A CRC (Cyclic Redundancy Check) **104** is a code added to the answer packet for error detection/correction.

The answer packet generated in the above manner is input to a coder **47** whereat an error correction coding such as convolutional coding is performed. The coded answer packet is input to a unit **41** for inserting a traffic channel transmission power control signal.

The other acquisition/despread circuits **42***a* to **42***n* provided for a plurality of uplink traffic channels each output a data packet transmitted via each uplink traffic channel. The data packet of each channel is supplied via a signal line **52** to a detector **43***a*–**43***n* and a decoder **44***a* to **44***n* to be detected and decoded, and the reception data is output from a signal line **54**.

The data packet is also supplied via a signal line **53** to a unit **45** for measuring the received level of the traffic channel. The structure of this unit **45** is shown in FIG. **5**. The received level measurement units **45***a* to **45***n* corresponding to the uplink traffic channels **53***a* to **53***n* measure the received level such as an SN ratio.

The received level measurement result of each traffic channel is input to a traffic channel transmission power control signal generator **46**. The structure of the generator **46** is shown in FIG. **6**. Each of the transmission power control signal generators **46***a* to **46***n* provided for each uplink traffic channel compares the received level with a target reception level, and generates a transmission power control signal for making the mobile terminal renew the transmission power when it continues data transmission. Similar to the initial transmission power control signal, this renewal designation transmission power control signal is determined by the system. The generated transmission power control signal is input to the unit **41** for inserting the traffic channel transmission power control signal.

As shown in FIG. **7**, the traffic channel transmission power control signal insert unit **41** inserts a common transmission power control signal **111** generated by the traffic channel transmission power control signal generator **46** at a predetermined interval between answer packets **110** input from the answer packet generator **38**. The common transmission power control signal **111** is constituted of transmission power control signals **111***a* to **111***n* of respective traffic channels **1** to n.

In order to suppress a fluctuation of the received level of a data packet, the base station is required to perform a transmission power control of each mobile terminal at a sufficiently high occurrence frequency. The data packet is made of several tens of bits to allow information of some amount to be transmitted at the same time. In contrast, the common transmission power control signal **111** can be made of n bits assuming the same system as IS-95. As shown in FIG. **4**, the answer packet can be made sufficiently small relative to the size of a data packet. Therefore, as in this embodiment, even if the answer channel and the transmission power control channel are shared, the transmission power control can be performed at a sufficiently high occurrence frequency. If the answer packet and the common transmission power control signal are received by the same channel, the mobile terminal can use a common receiver both for the answer packet and common transmission power control signal. In this manner, the circuit scale of each mobile terminal can be made small.

It is also possible to transmit the common transmission power control signal at a transmission power larger than that of the answer packet in order to reliably perform the transmission power control.

The answer packet and common transmission power control signal are spectrum spread by a spreader **48** for answer channel. The spectrum spread answer packet and common transmission power control signal are multiplexed with other downlinks by an adder **58**, modulated from the baseband signal into a signal in the carrier frequency band by a transmission radio module **49**, and transmitted from the antenna **30** via the circulator **31**.

An example of the structure of a mobile terminal is shown in FIG. **8**.

The operation of transmitting a reservation packet from a mobile terminal will be described.

A signal received by an antenna **30** is input via a circulator **61** to a reception radio module **62**. The reception radio module **62** performs a high/middle frequency reception process to demodulate a signal in the carrier frequency band into a baseband signal. A pilot signal output from an acquisition/spread circuit **150** for a pilot channel is input to a unit **151** for measuring a received level. This unit **151** measures the received level (e.g., SN ratio) of the pilot signal. The measurement result of the received level is input to a reservation channel gain calculator **152** which determines the transmission power of a reservation packet in accordance with the received level of the pilot signal.

In the mobile communication system provided with independent pilot channels, the pilot signal is transmitted from the base station always at a constant transmission power level. Therefore, if an SN ratio of the received pilot signal is large, it is conceivable that the mobile terminal is near at the base station so that the reservation channel gain calculator **152** calculates a small gain. Conversely, if an SN ratio of the received pilot signal is small, it is conceivable that the mobile terminal is far from the base station so that the reservation channel gain calculator **152** calculates a large gain. In order to determine the transmission power of a reservation packet in the above manner, another signal different from the pilot signal may be used so long as it allows the mobile terminal to know the transmission power of the base station. For example, the pilot signal whose transmission power is determined by the system or a control signal transmitted with the transmission power value can satisfy the above conditions.

Next, an operation will be described in which a mobile terminal that transmitted a reservation packet to the base station receives an answer packet transmitted from the base station.

An answer packet output from the despread circuit **63** for an answer channel is detected with a detector and subjected to an error correction/decode process such as Viterbi decoding. With the above processes, it becomes possible to obtain the information of an allocated traffic channel and an allocated time slot contained in the answer packet. An initial transmission power holder **125** holds an initial transmission power signal contained in the answer packet, and inputs the initial transmission power signal to a data channel gain calculator **124** which calculates a gain so that a data packet can be transmitted at a transmission power designated by the initial transmission power signal. The calculated gain is set as the gain of a variable gain amplifier **68**.

The data packet transmitted from the mobile terminal is amplified by the variable gain amplifier **68** at the gain designated by the data channel gain calculator **124**. The